UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

John N. Lee
X-6245-C
Rm 309

DATE: August 24, 1978

SUBJECT: Everseal Canvas Preservative (Active Ingredient: Copper 8 - qunolinolate)-New Registration EPA Reg. No. 39365-R Caswell No. 253 Shaughnessy No. 024002

FROM: Toxicology Branch
Hazard Evaluation Division Tagy Anderson

TO: John Lee
Product Manager No. ~~25~~ 33

Recommendations

Acute oral LD_{50}, acute dermal LD_{50}, eye irritation, and skin irritation studies are satisfactory; however, the acute inhalation LC_{50} study is unacceptable for reasons stated in the review. An additional data requirement for registration which has not yet been submitted is a subacute dermal study of the formulation (see memo by R.B. Jaeger, 1/25/78).

The relative toxicity of the formulation shown in the studies reviewed herein provide support for the label, proposed by the registrant, based on the signal word CAUTION. Precautionary and first aid statements are acceptable; however, the following changes are suggested:

1. The phrase "....wash eyes immediately with copious amounts of water..." should be replaced with "....wash eyes with plenty of water for at least 15 minutes...."

2. Because the diluted formulation may be used as a spray, the statement "Avoid breathing spray mist.should be included in the label.

3. The product contains methanol which may present a human hazard; therefore, the label must bear the statement "Contains Methanol." This statement should appear in close proximity to the ingredient statement.

* No RPAR criteria have been exceeded.

Review

Acute Toxicity Studies of TT-P-595 in Rats and Rabbits (Wells Laboratories, Inc., Lab Nos. 2786-2790, 6/2/78-6/29/78, submitted by Everseal Manufacturing Co., Inc. 6/26/78).

A. Acute Inhalation LC_{50} Study in Rats

1. Procedure

A group of 10 rats (5 males and 5 females) were exposed to a mist of test material in a closed chamber of known volume for 1 hour. Concentration levels were 0.2, 0.5, 0.75, 1.0 and 2.0 ml/L/hr. Observations of mortality and toxic signs were made over 14 days post-treatment. Necropsies were performed.

2. Results

a. Mortality: None. LC_{50} >2.0 ml/L/hr.

b. Toxic signs: Partial alopecia

c. Necropsy

i. Decedents: Bloody lungs, engorged veins around stomach and intestines, dark spleen, enlarged heart.

ii. Survivors: Bloody lungs, dark and enlarged spleen

3. Conclusions

a. Classification: Invalid Data

i. No mortality due to the effect of test material was reported; yet, necropsies were indicated for both dead and surviving animals.

ii. A group of 10 rats is stated in the procedure, but findings for 10 rats/each of 5 dosage levels are described in the results. Accompanying copies of raw data show that exposure of animals to only 1 dosage level was done on any given day; therefore, it is uncertain whether 1 group or 5 groups of rats were actually used in the study.

iii. Body weight data were not reported.

b. Tox. Cat.: IV (Not applicable)

B. Acute Oral LD_{50} Study in Rats

1. Procedure

Fifty rats, 200-250 g were separated into 5 groups of 10 animals each (5 males and 5 females) which were given 30, 35, 40, 45 or 50 ml/kg of test material by gavage. Observations of toxic signs and mortality were made during 14 days post-treatment. Necropsies were done.

2. Results

a. Mortality: None. $LD_{50} > 50$ ml/kg
b. Toxic Signs: Pigmented stool, diarrhea.
c. Necropsy: Bloody lungs, dark and inflamed spleen

3. Conclusions

a. Core Minimum Data

i. Body weights in conjunction with food intake were not determined daily.

ii. The procedure was fully described in accompanying copies of raw data but was only referenced (Appraisal of the Safety of Chemicals in Food, Drug, and Cosmetics) in the final report.

b. Tox. Cat.: IV

C. Acute Dermal LD_{50} study in Rabbits

1. Procedure

Sixteen rabbits, 2.8-3.2 kg, were divided into 4 groups of 4 animals each (2 males and 2 females) which received dermal applicationsof 25, 30, 35, or 40 ml/kg of test compound. The method used is described in CFR 16, Part 1500.3(c)(1)and (2). Observations of mortality and toxic signs were made over 14 days following treatment. Necropsies were done.

2. Results

a. Mortality: None $LD_{50} > 40$ ml/kg

b. Toxic Signs: Weight loss, alopecia; test sites show hyperemia, thickening, tanning, eschar formation, and peeling of epidermis from dermis.

c. Necropsy: Swelled, discolored, hemorrhagic kidneys, dark and enlarged spleen, pneumonia, enlarged heart, engorged omentum, enlarged hemorrhagic liver, small gall bladder, hyperemic duodenum, hyperemic and edematous peritoneum.

3. Conclusions

a. Classification: Core Minimun Data

i. The procedure is not fully described but is referenced

ii. Use of abraded test sites is not clearly indicated.

iii. Body weights in conjunction with food intake were not determined daily.

b. Tox. Cat.: IV

D. Eye Irritation Study in Rabbits

1. Procedure

The method employed is described in CFR 16, Part 1500.42. Six rabbits were used, and injuries were scored apparently according to the method of Draize et. al. (1944) for 7 days post-treatment.

2. Results

Eye Injuries: No irritation

3. Conclusions

a. Classification: Core Minimum Data

i. The procedure was not completely described but was referenced.

b. Tox. Cat.: IV

E. Skin Irritation Study in Rabbits

1. Procedure

The method explained in CFR 16, Part 1500.41 was used. A 0.5 ml aliquot of test material was applied to both intact and abraded skin of each of 6 rabbits. Irritation apparently was scored according to the method of Draize et.al. (1944) at 24 and 72 hours following treatment.

2. Results

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3. Conclusions

a. Classification: Core Minimum Data

i. The procedure was referenced but was not completely described.

b. Tox. Cat.: IV

F. Final Conclusions

Studies reviewed within support use of a label based on the signal word CAUTION as follows:

Hazard Indicator	Tox. Cat.
Acute Inhalation LC_{50}	Not applicable
Acute Oral LD_{50}	IV
Acute Dermal LD_{50}	IV
Eye Irritation	IV
Skin Irritation	IV

Larry Anderson

RD/init:REngler 8/22/78;km

E 9/5/78